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10/567,075	05/24/2010	Andreas Hackbarth	2003P01101WOUS.	9490

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BSH HOME APPLIANCES CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

DANG, KET D

ART UNIT	PAPER NUMBER
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3742

NOTIFICATION DATE	DELIVERY MODE
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02/04/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/567,075	Applicant(s) HACKBARTH ET AL.	
	Examiner KET D. DANG	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the amendment filed on October 7, 2010. As directed by the amendment: claims 18-33 and 35-49 have been amended, claims 1-17 have been cancelled and two new claims 50 and 51 have been added. Thus, claims 18-51 are presently pending in this application.

Response to Amendment/Arguments

2. Applicant's amendments/arguments with respect to claims 18-49 and two new independent claims 50-51 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendments have overcome part of the specification guidelines objection and 35 U.S.C. 112, second paragraph rejections from the previous Office Action.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show a winding core (27) in figure 2, side walls (86) and (88), and centering elevation (90) in figure 8, and an outer wall, an inner wall, and a base of the winding core as described on pages 2-3 of the specification. What is the distinction between the winding core (16) and a winding core (27) limitations because a winding core (27) is not shown on any figures? **Any structural detail that is essential for a proper understanding of the**

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disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "72" and "74" in figure 8 have both been used to designate the winding core. Reference characters "20" and "29" in figure 1 have both been used to designate the primary winding. Reference characters "80" and "82" in figure 8 have both been used to designate the winding. Reference characters "76" and "78" in figure 8 have both been used to designate the central column. Clarification is needed for above reference numbers, i.e. show distinction between them. Corrected

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drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it was not a separate sheet and it contains claim language such as comprises. Correction is required. See MPEP § 608.01(b).

The amendment filed October 7, 2010 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material to the claims which is not supported by the original disclosure as the following: In claim 50, recites the limitation "a winding core having an outer wall, an inner wall, and a base connecting the outer wall and the inner wall such that the outer wall, inner wall and base form a trough in which the secondary winding is positioned." Furthermore, there is a similar issue as in claim 51. The specification on page 2, last paragraph, talks about the winding core walls and a base. However, since the winding core was defined in many terms such as core element, pot core, symmetrical core, ring core, etc. It is very unclear and confusing to what core is referring to, not consistent.

Applicant is required to cancel or clarify the new matter in the reply to this Office Action. The examiner respectfully requests that applicant directs the examiner to the disclosure for any new recited limitations. It would be helpful to understand of the disclosed invention. The examiner respectfully requests that applicant illustrates all of the essential limitations in the drawings.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 31-33, 47-49, 50, and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 31 and 47 recite the limitation "the same number of heating conductors" at line 2 in the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 47 recites the limitation "core elements" at line 3 renders the claim indefinite. It is unclear for whether these core elements are the same as the one recited at line 2 in claim 38. If it is so, then "the" or "said" should be used. If it is not, then essential structural cooperative relationships between the two are suggested.

Claim 50 recites the limitations "inner wall" and "base" at line 6 in the claim, respectively, renders the claim indefinite. It is unclear for whether these inner wall and base are the same as the ones recited at line 5 in the claim. If it is so, then "the" or "said" should be used. If it is not, then essential structural cooperative relationships between the two are suggested.

Claim 51 recites the limitations "inner wall" and "base" at line 6 in the claim, respectively, renders the claim indefinite. It is unclear for whether these inner wall and base are the same as the ones recited at line 5 in the claim. If it is so, then "the" or "said" should be used. If it is not, then essential structural cooperative relationships between the two are suggested.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 18-20, 22-26, and 50 are rejected under 35 U.S.C. 102(a) as being anticipated by Hibino et al. (US 3928744).

Regarding claim 18, Hibino et al. discloses a device for heating food by means of induction (abstract), comprising: heating means including a secondary winding 70 (fig. 4) (col. 8, lines 63 – col. 9, lines 6) formed from a current conductor 30 (fig. 1) (col. 4, lines 65- col. 5, lines 9) and a heating element 10 (fig. 23) connected to said secondary winding 70 (fig. 4); a winding core 60 (fig. 23) or 61/62/63 (fig. 4, i.e. E-shaped) disposed inside said secondary winding 70 (fig. 4) (col. 8, lines 63 – col. 9, lines 6, i.e. the excitation coil wraps around the core (62)).

With respect to claim 19, Hibino et al. discloses wherein the winding core 67 (fig. 6) is substantially rotationally symmetrical (i.e. the cores (67) are rotationally symmetrical by 90° or 180° apart).

With respect to claim 20, Hibino et al. discloses a winding core 60 (fig. 23) being configured as a pot core (same configuration as applicant's figure 8, reference number (74)).

With respect to claim 22, Hibino et al. discloses wherein the winding core 60 (fig. 1) includes a plurality of core elements 61/62/63/64 (fig. 22) (there are four of them as seen in figure 22).

With respect to claim 23, Hibino et al. discloses said wherein the core elements 61/62/63/64 (fig. 22) are arranged on a substantially circular path and configured substantially as circular-ring-segment-shaped (see figure 22 for circular arrangement of core elements (67)).

With respect to claim 24, Hibino et al. discloses wherein the core elements 60 (fig. 31) are substantial U-shaped in one radial cross-section (see figure 31).

With respect to claim 25, Hibino et al. discloses wherein the core elements 61/662/63 (fig. 4) are substantial E-shaped in one radial cross-section (col. 4, lines 39-42).

With respect to claim 26, Hibino et al. discloses retaining means which interconnect the core elements 61/62/63/64 (fig. 22) in a load-bearing manner 10 (fig. 20) (col. 8, lines 25-37).

With respect to claim 50, Boys et al. discloses a device for heating food by induction (abstract), the device comprising: a container 10 (fig. 1) for containing the food to be heated; and a heating section 30 (fig. 1) fixed to the container 10 (fig. 1) and having a secondary winding (col. 8, lines 63 – col. 9, lines 6) formed from a current conductor J (fig. 6) (col. 4, lines 65- col. 5, lines 9); a winding core 60 (fig. 1) having an outer wall, an inner wall, and a base connecting the outer wall and the inner wall such that the outer wall, inner wall and base form a trough in which the secondary winding

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(col. 8, lines 63 – col. 9, lines 6) is positioned, a heating element 20/30 (fig. 23) electrically connected to the secondary winding and position adjacent to the container 90 (fig. 23), wherein the outer wall and the inner wall are substantially circular and are arranged concentrically (see in figures 21-22 and 32-33), the outer and inner walls are circular and concentrically).

9. Claims 34, 36, 38-40, 42, 44, and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroeder (US 3530499).

Regarding claim 34, Schroeder discloses a device for transmitting energy (i.e. the bottom part of figure 1 for cooking food) to a device for heating food 11 (fig. 1) by means of induction (see figure 1), comprising: a primary winding 14 (fig. 2) formed from a current conductor and connected to a voltage source L1/L2 (fig. 4); and a winding core 13 (fig. 4) located inside said primary winding 14 (fig. 2 and figure 4) (col. 5, lines 39-50).

With respect to claim 36, Schroeder discloses a winding core 13 (fig. 4) being configured as a pot core 53 (fig. 5, same configuration as applicant's figure 8, reference number (72)).

With respect to claim 38, Schroeder discloses a plurality of core elements 53/55 (fig. 5 or 73/75/76 in fig. 7).

With respect to claim 39, Schroeder discloses the core elements 73/75/76 (fig. 7) are arranged on a substantially circular path and configured substantially as circular-ring-segment-shaped (see figure 7).

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With respect to claim 40, Schroeder discloses the core elements 15/13 (fig. 2) being substantially U-shaped in one radial cross-section (see figure 2).

With respect to claim 42, Schroeder discloses retaining 26 (fig. 2) means which interconnects the core elements 15/13 (fig. 2) in a load-bearing manner (see figure 2).

With respect to claim 44, Schroeder discloses retaining 26 (fig. 2) means substantially ring-shaped (see figure 2).

With respect to claim 51, Schroeder discloses a primary winding 14 (fig. 2) formed from a current conductor and connected to a voltage source L1/L2 (fig. 4); and a winding core 75 (fig. 7) having an outer wall, an inner wall, and a base connecting the outer wall and the inner wall such that the outer wall, inner wall and base form a trough in which the primary winding 14 (fig. 2) is positioned, wherein the outer wall and the inner wall are substantially circular and are arranged concentrically (see figure 7).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 21 and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino et al. (US 3928744) in view of Schroeder (US 3530499) and, Akel et al. (US 6498325 B1) and further in view Ose et al. (US Pub. No. US 20010019048 A1).

Hibino et al. discloses the winding core 60 (fig. 4) includes a central column 62 (fig. 4) having the first axial height (i.e. the central part of the winding core between the coils (61) and (63) as shown in figure 4).

Hibino et al. discloses all of the limitations of the claimed invention as set forth above, except for a second axial height different from the first axial height; a printed circuit board; and the heating element includes at least two heating conductors that are arranged substantially symmetrically with respect to another and in a substantially circular heating area.

However with respect to claim 21, a second axial height different from the first axial height is known in the art. Schroeder, for example, teaches a second axial height different from the first axial height (col. 6, lines 57- 75). Schroeder also teaches U-shaped and E-shaped cores (col. 7, lines 44-54).

Schroeder further teaches such a configuration provides corresponding flexibility in adaptability to energization of a plurality of different appliance units separately or simultaneously (col. 7, lines 46-48).

Similarly with respect to claims 27-30, a printed circuit board is known in the art. Akel et al., for example, teaches a printed circuit board 105 (fig. 9) (col. 5, lines 53 – col. 6, lines 17; col.10, lines 56 – col. 11, lines 32). Akel et al. further teaches such a configuration provides a means to facilitate manufacture of the induction-heated cooker hobs and improve the inductors modular nature at the stage when they are made (col. 5, lines 53-55).

Furthermore with respect to claim 31-33, the heating element includes at least two heating conductors that are arranged substantially symmetrically with respect to another and in a substantially circular heating area is known in the art. Ose et al., for example, teaches the heating element includes at least two heating conductors 158/160/162/ (fig. 10) that are arranged substantially symmetrically with respect to another and in a substantially circular heating area (abstract; see figure 10; para. 0010, 0090-0095). Ose et al. further teaches such a configuration provides a means to achieve a heating conductor which is defined with good control of the heatup characteristic (para. 0023).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Hibino et al. with a second axial height different from the first axial height of Schroeder in order to provide corresponding flexibility in adaptability to energization of a plurality of different appliance units separately or simultaneously. Similarly, it would have been obvious to one of ordinary skill in the art to modify Hibino et al. in view of Schroeder with a printed circuit board of Akel et al. in order to provide a means to facilitate manufacture of the induction-heated cooker hobs and improve the inductors modular nature at the stage when they are made. Furthermore, it would have been obvious to one of ordinary skill in the art to modify Hibino et al. in view of Schroeder and Akel et al. with the heating element includes at least two heating conductors that are arranged substantially symmetrically with respect to another and in a substantially circular heating area of Ose et al. in order to achieve a heating conductor which is defined with good control of the heatup characteristic.

12. Claims 35, 37-43, and 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder (US 3530499) in view of Hibino et al. (US 3928744), Akel et al. (US 6498325 B1) and further in view Ose et al. (US Pub. No. US 20010019048 A1).

With respect to claim 37, Schroeder discloses a second axial height different from the first axial height (col. 6, lines 57- 75).

With respect to claims 40-41, Schroeder teaches U-shaped and E-shaped cores (col. 7, lines 44-54).

Schroeder discloses all of the limitations of the claimed invention, except for the winding core includes a central column having the first axial height; wherein the winding core is substantially rotationally symmetrical; U-shaped and E-shaped cores; a plurality of core elements; a printed circuit board; and the heating element includes at least two heating conductors that are arranged substantially symmetrically with respect to another and in a substantially circular heating area.

However, the winding core includes a central column having the first axial height is known in the art. Hibino et al., for example, teaches the winding core 60 (fig. 4) includes a central column 62 (fig. 4) having the first axial height (i.e. the central part of the winding core between the coils (61) and (63) as shown in figure 4).

With respect to claim 35, Hibino et al. discloses wherein the winding core 67 (fig. 6) is substantially rotationally symmetrical (i.e. the cores (67) are rotationally symmetrical by 90° or 180° apart).

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With respect to claim 38, Hibino et al. discloses wherein the winding core 60 (fig. 1) includes a plurality of core elements 61/62/63/64 (fig. 22) (there are four of them as seen in figure 22).

With respect to claim 39, Hibino et al. discloses said wherein the core elements 61/62/63/64 (fig. 22) are arranged on a substantially circular path and configured substantially as circular-ring-segment-shaped (see figure 22 for circular arrangement of core elements (67)).

With respect to claim 42, Hibino et al. discloses retaining means which interconnect the core elements 61/62/63/64 (fig. 22) in a load-bearing manner 10 (fig. 20) (col. 8, lines 25-37).

Hibino et al. further teaches such a configuration provides a means to permit the attainment of an especially high thermal efficiency while also preventing substantial noise and vibration due to a substantial reduction in the electromagnetic forces applied to the vessel (col. 1, lines 65-68).

Similarly with respect to claims 43 and 45-46, a printed circuit board is known in the art. Akel et al., for example, teaches a printed circuit board 105 (fig. 9) (col. 5, lines 53 – col. 6, lines 17; col.10, lines 56 – col. 11, lines 32). Akel et al. further teaches such a configuration provides a means to facilitate manufacture of the induction-heated cooker hobs and improve the inductors modular nature at the stage when they are made (col. 5, lines 53-55).

Furthermore with respect to claims 47-49, the heating element includes at least two heating conductors that are arranged substantially symmetrically with respect to

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another and in a substantially circular heating area is known in the art. Ose et al., for example, teaches the heating element includes at least two heating conductors 158/160/162/ (fig. 10) that are arranged substantially symmetrically with respect to another and in a substantially circular heating area (abstract; see figure 10; para. 0010, 0090-0095). Ose et al. further teaches such a configuration provides a means to achieve a heating conductor which is defined with good control of the heatup characteristic (para. 0023).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Schroeder with the winding core includes a central column having the first axial height of Hibino et al. in order to permit the attainment of an especially high thermal efficiency while also preventing substantial noise and vibration due to a substantial reduction in the electromagnetic forces applied to the vessel. Similarly, it would have been obvious to one of ordinary skill in the art to modify Schroeder in view of Hibino et al. with a printed circuit board of Akel et al. in order to provide a means to facilitate manufacture of the induction-heated cooker hobs and improve the inductors modular nature at the stage when they are made. Furthermore, it would have been obvious to one of ordinary skill in the art to modify Schroeder in view of Hibino et al. and Akel et al. with the heating element includes at least two heating conductors that are arranged substantially symmetrically with respect to another and in a substantially circular heating area of Ose et al. in order to achieve a heating conductor which is defined with good control of the heatup characteristic.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KET D. DANG whose telephone number is (571) 270-7827. The examiner can normally be reached on Monday - Friday, 7:30 - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Tu can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KET D DANG/
Examiner, Art Unit 3742
January 21, 2011

/Stephen J Ralis/
Primary Examiner, Art Unit 3742